

Amendments to the Specification:

Please replace paragraph 26 beginning at page 7, line 19, with the following amended paragraph:

One sleeve 41 is positioned over the inner shaft 45 beneath the balloon adjacent the distal balloon weld 47 and a second sleeve 41 is positioned beneath the balloon 44 and adjacent the proximal balloon weld 48. In an ideal arrangement, a stent positioned on the balloon 44 will be located to overlie the space between the transition sleeves 41 and will partially overlap a transition sleeve at each of the ends of the stent. The marker bands 46 are a typical feature of stent delivery systems. They are usually formed of a radiopaque material and are used by the physician to enable the position of the stent in a body vessel to be visualised. Whilst the stent has been omitted from this diagram for clarity, if it were in position it would be crimped over the balloon 44 between the marker bands 46. In this embodiment of the present invention, the sleeves 41 comprise lengths of tubing fixed in position on the inner shaft 45 above and overlapping the marker bands 46. The material selected is of a stiffness intermediate those of the relatively stiffer stent and the relatively flexible catheter shafts 45, 43. The distal shaft portion has a first stiffness and then a second stiffness at the position of the stent, or intravascular device, on the shaft. The stent is relatively stiffer than the relatively flexible catheter shafts 43 and 45 and so the second stiffness will be greater than the first stiffness. Once a stent is assembled onto the balloon 44, it rests between the pair of marker bands 46 so that the bands are clearly visible to the eye and are not rendered obscured to a non-visual imaging system. The visibility of the marker bands assists the assembly person in locating the stent at a correct position on the balloon intermediate the two marker bands and for this reason, it is desirable that the sleeve material should be transparent or translucent so that the bands remain visible beneath the sleeves. A first portion 41a of each sleeve is provided to underlie the stent and a second portion 41b is disposed clear of the stent so as to ensure as even as possible a transition in stiffness from catheter shaft to balloon to stent. The purpose of these stiffness transitions is to smooth out the stiffness profile of the combined balloon catheter and stent thus reducing the risk of tracking and efficiency discontinuities resulting in the catheter getting hung-up or hinging.